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| APPLICATION NO.         | FILING DATE | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO.          | CONFIRMATION NO |  |
|-------------------------|-------------|-------------------------|------------------------------|-----------------|--|
| 10/644,639              | 08/20/2003  | Xiao-Zhuo Michelle Wang | A32815-I -I -<br>072667.0190 | 7944            |  |
| 7590 06/13/2005         |             |                         | EXAM                         | EXAMINER        |  |
| BAKER BOTTS L.L.P.      |             |                         | ULM, JOHN D                  |                 |  |
| 44 TH FLOOR             |             |                         |                              |                 |  |
| 30 ROCKEFELLER PLAZA    |             |                         | ART UNIT                     | PAPER NUMBER    |  |
| NEW YORK, NY 10112-0228 |             |                         | 1646                         |                 |  |

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Application No.                                                                                                                                                                          | Applicant(s)                                                                                                  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Office Action Summan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10/644,639                                                                                                                                                                               | WANG ET AL.                                                                                                   |  |  |  |  |
| Office Action Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Examiner                                                                                                                                                                                 | Art Unit                                                                                                      |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | John D. Ulm                                                                                                                                                                              | 1646                                                                                                          |  |  |  |  |
| The MAILING DATE of this communication app<br>Period for Reply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ears on the cover sheet with the c                                                                                                                                                       | orrespondence address                                                                                         |  |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply If NO period for reply is specified above, the maximum statutory period w  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). | i6(a). In no event, however, may a reply be time within the statutory minimum of thirty (30) days ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE | nely filed<br>s will be considered timely.<br>the mailing date of this communication.<br>D (35 U.S.C. § 133). |  |  |  |  |
| Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 1) Responsive to communication(s) filed on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                          | •                                                                                                             |  |  |  |  |
| , , ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 3) Since this application is in condition for allowance except for formal matters, prosecution as to the ments is                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| closed in accordance with the practice under E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | x parte Quayle, 1935 C.D. 11, 45                                                                                                                                                         | 53 O.G. 213.                                                                                                  |  |  |  |  |
| Disposition of Claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 4) Claim(s) 1-37 is/are pending in the application.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 4a) Of the above claim(s) is/are withdrawn from consideration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 5) Claim(s) is/are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 6) Claim(s) is/are rejected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 7) Claim(s) is/are objected to.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 8) Claim(s) <u>1-37</u> are subject to restriction and/or e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | election requirement.                                                                                                                                                                    |                                                                                                               |  |  |  |  |
| Application Papers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                          | ·                                                                                                             |  |  |  |  |
| 9) The specification is objected to by the Examiner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | г.                                                                                                                                                                                       |                                                                                                               |  |  |  |  |
| 10)☐ The drawing(s) filed on is/are: a)☐ acce                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | epted or b) $\square$ objected to by the B                                                                                                                                               | Examiner.                                                                                                     |  |  |  |  |
| Applicant may not request that any objection to the o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | frawing(s) be held in abeyance. See                                                                                                                                                      | e 37 CFR 1.85(a).                                                                                             |  |  |  |  |
| Replacement drawing sheet(s) including the correcti                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 11)☐ The oath or declaration is objected to by the Ex                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | aminer. Note the attached Office                                                                                                                                                         | Action or form PTO-152.                                                                                       |  |  |  |  |
| Priority under 35 U.S.C. § 119                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| <ul> <li>12) Acknowledgment is made of a claim for foreign</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents</li> <li>2. Certified copies of the priority documents</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                | s have been received.                                                                                                                                                                    | , , , , ,                                                                                                     |  |  |  |  |
| 3.☐ Copies of the certified copies of the prior                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | · · · · · · · · · · · · · · · · · · ·                                                                                                                                                    |                                                                                                               |  |  |  |  |
| application from the International Bureau                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -                                                                                                                                                                                        |                                                                                                               |  |  |  |  |
| * See the attached detailed Office action for a list of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | of the certified copies not receive                                                                                                                                                      | d.                                                                                                            |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| Attach manufa)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| Attachment(s)  1) Notice of References Cited (PTO-892)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4) T Interview Summary                                                                                                                                                                   | (PTO_413)                                                                                                     |  |  |  |  |
| 1) Untice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  Paper No(s)/Mail Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                          |                                                                                                               |  |  |  |  |
| 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5)  Notice of Informal P. 6)  Other:                                                                                                                                                     | atent Application (PTO-152)                                                                                   |  |  |  |  |

U.S. Patent and Trademark Office PTOL-326 (Rev. 1-04) Application/Control Number: 10/644,639

Art Unit: 1646

Claims 1 to 37 are pending in the instant application.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- Claims 1 to 14 and 16 to 22, drawn to an isolated nucleic acid, classified in class 536, subclass 23.5.
- II. Claims 15 and 31 to 37, drawn to a membrane preparation comprising a specific protein, classified in class 530, subclass 350.
- III. Claims 23 to 29, drawn to a biospecific binding assay, classified in class 436, subclass 501.
- IV. Claim 30, drawn to an "agent' of unspecified constitution, classification undeterminable.

The inventions are distinct, each from the other because:

The nucleic acid of invention I, the protein that defines the membrane preparation of invention II, and the "agent" of invention IV are three chemically and structurally unrelated compounds each of which can be made and used without the others. These three different chemical compounds lack unity of invention because they lack a common utility that is based upon a common feature or combination of features lacking from the prior art.

Inventions I and II are each related to invention III as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the

Application/Control Number: 10/644,639

Art Unit: 1646

DIVEORATOR NUMBER: 10/044,00

assay, as claimed, can be practice with materially different products such as a recombinant cell, a membrane preparation from a source that naturally expresses a channel protein of the instant invention, or an intact cell that naturally expresses that channel protein.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Ulm whose telephone number is (571) 272-0880. The examiner can normally be reached on 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa can be reached on (571) 272-0829. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Application/Control Number: 10/644,639

Art Unit: 1646

Page 4

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JOHN ULM PRIMARY EXAMINER GROUP 1800